Patent claims

1. Method for monitoring a control unit of an internal combustion engine,

according to which a variable, which characterizes the output
5   parameter of a lambda regulation system, is monitored for a deviation from a predefined reference value and an error response takes place as a function of the deviation that has been determined.

2. Method according to claim 1, characterized in that the
10   variable which characterizes the output parameter of a lambda regulation system, is the output parameter (L_OUT).

3. Method according to claim 2, characterized in that the deviation of the value of the output parameter (L_OUT) is compared with a predefined desired value (L_OUT_SP) of the
15   output parameter, the deviation is summed and an error is detected if the summed deviation (DELTA) exceeds a predefined threshold value (THD_2).

4. Method according to claim 3, characterized in that from the amount of the deviation a further threshold value (THD_1) is
20   deducted and this corrected deviation is then summed in which case the other threshold value (THD_1) is determined as a function of at least one load variable of the internal combustion engine.

5. Method according to claim 4, characterized in that the load
25   variable is the torque of the internal combustion engine and the rotational speed (N).

6. Method according to claim 1, characterized in that the variable which characterizes the output parameter of a lambda regulation system depends on the derivation in time of the
30   output parameter (L_OUT) of the lambda regulation system.

7. Method according to claim 1, characterized in that the variable which characterizes the output parameter (L_OUT) of a lambda regulation system is a value of an air mass flow determined from the injection parameters in the cylinders of the internal combustion engine.

8. Method according to claim 7, characterized in that the value of the air mass flow determined from the injection parameters is determined as a function of a start of injection and end of injection signal (SOI, EOI) which are generated by the control unit (2).

9. Method according to claim 7 or 8, characterized in that the deviation of the value of the air mass flow determined from the injection parameters is compared with an actual value (MAF_AV) of the air mass flow, the deviation is summed and an error is detected if the summed deviation (DELTA) exceeds a predefined threshold value (THD_2).

10. Method according to claim 8, characterized in that a further threshold value (THD_4) is deducted from the amount of the deviation and this corrected deviation is then summed in which case the other threshold value (THD_4) is determined as a function of at least one of the load variables of the internal combustion engine.

11. Method according to claim 9, characterized in that the load variable is both the torque of the internal combustion engine and the rotational speed (N).

12. Method according to claim 1, characterized in that the variable which characterizes the output parameter of a lambda regulation system depends on a value of an air mass flow determined from injection parameters in the cylinders of the internal combustion engine.

13. Device for monitoring a control unit for an internal

combustion engine,

with a monitoring unit (B6, B7, B8) according to which a
variable, which characterizes the output parameter of a lambda
regulation system, is monitored for a deviation from a
predefined threshold value and initiates an error response as
a function of the deviation that has been determined.